



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,268	08/23/2005	Andreas Poppc	PAT-01050	4995
26922	7590	04/10/2006	EXAMINER	
BASF CORPORATION ANNE GERRY SABOURIN 26701 TELEGRAPH ROAD SOUTHFIELD, MI 48034-2442				HU, HENRY S
		ART UNIT		PAPER NUMBER
		1713		

DATE MAILED: 04/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/525,268	POPPE ET AL.	
	<b>Examiner</b> Henry S. Hu	<b>Art Unit</b> 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on Pre-Amendment of February 22, 2005.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) \_\_\_\_\_ is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) 1-32 are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	6) <input type="checkbox"/> Other: _____ .

1. It is noted that USPTO has received Pre-Amendment and an IDS (1 page) both filed on February 22, 2005. Improper use of multiple claim dependency is removed; some claims are amended cosmetically for clarification, while new Claims 31-32 are added. **Claims 1-32** with only one independent claim (**Claim 1**) are now pending. An action follows.

## **DETAILED ACTION**

### *Election/Restrictions*

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1, this is based on the preliminary search done by the examiner.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted as following:

I. **Claims 1-11, 20-24 and 31-32, drawn to a surface-modified nanoparticles whose surface is covered completely or near-completely with three different modifying groups as specified in (A)-(C).**

II. **Claims 12-19 and 25, drawn to a different surface-modified nanoparticles**

which is prepared by reacting the reactive functional groups of the surface of nanoparticles with three different modifier compounds as specified in (A)-(C) for surface modification.

III. **Claims 26-29, drawn to a dispersion comprising surface-modified nanoparticles in solvent(s).**

IV. **Claim 30, drawn to a composition comprising surface-modified nanoparticles.**

3. The inventions are distinct, each from the others because of the following reasons:

**Inventions I, II, III and IV are unrelated each other.** Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different same functions, or different effects (MPEP § 806.04, MPEP § 808.01). Although some of surface-modifying compounds in all invention groups may involve the same chemical reaction(s) as well as carrying the same or similar reactive functional groups, they are actually quite different products made from different method or process of making.

4. **Group I** requires using the modifier compound to cover on the surface of nanoparticles and it may be physical covering only, while **Group II** requires a chemical coupling reaction by reacting a modifier compound with the reactive functional groups from surface of nanoparticles. Therefore, the molecular interface between the modifier compound and surface of nanoparticles

may be quite different. Nanoparticles from Group I is not necessarily fallen within Group II, while Group II may not covered completely or near-completely as Group I since the functional groups on surface of nanoparticle may not reacted completely. In a very close examination, the process of making is unique and thereby not interchangeable.

5. In the instant case Group I or Group II was drawn to different types of nanoparticles, while Group III was drawn to a dispersion by using solvent(s), and Group IV was drawn to a composition useful for many purposes. Therefore, the scope of the claims, i.e., the metes and boundaries are distinct.

6. Where the group of inventions is claimed in one and the same international application, the requirement for unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions considered as a whole, makes over the prior art. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, although they share the special technical feature, this special technical feature does not define a contribution over the prior art for the following reasons: Claims 1-32 may be either obvious or anticipated by following **EP 875,500A1 to Groth et al.**, **WO 97/038058 A to Lesniak et al.** and **WO 02/062881 A3 to Kolb et al.** cited in the international search report of this application's priority document PCT/EP03/10922, each individually or in combination. In

summary, these methods have no common features in the preparation as well as its application since **they are using different methods and/or making different products.** The scope of the claims, i.e., the metes and boundaries are distinct. Accordingly, the special technical feature linking the inventions does not provide a contribution over the prior art, and no single general inventive concept exists. Therefore the restriction is appropriate

7. Because these inventions are distinct for the reasons given above shown as different subject matters and the search required for each group is not required for other groups have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

8. It is noted that no phone call was made to **Anne Gerry Sabourin (registration # 33,772, tel: 248 948-2021)** by the examiner due to the complexity on this particular PCT case. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

9. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the

Art Unit: 1713

currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Conclusion***

11. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is **(571) 272-1103**. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The fax number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

April 5, 2006

  
DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700